CORRES. CONTROL
INCOMING LTR NO.

4397 RF 92

DATE

ACTION

DIST.	LTR	ENC
BENJAMIN, A.		
BERMAN, H.S.		
BRADY, J.A.		
BRANCH, D.B.		
CARNIVAL, G.J.		
COPP, R.D.		
CORDOVA, R.C.		
DAVIS, J.G.		
EVERED, J.E.		
FERRERA, D.W.		
GOODWIN, R.		
HANNI, B.J.		
HEALY, T.J.		
HILBIG, J.G.		
IDEKER, E.H.		
KERSH, J.M.	X	X
KIRBY, W.A.		
KRIEG, D.		
KUESTER, A.W.		
LEE, E.M.	X	X
MARX, G.E.		
MORGAN, R.V.		
PIZZUTO, V.M.		
POTTER, G.L.		
SANDLIN, N.B.		
SATTERWHITE, D.G		
SCHUBERT, A.L.		
SHEPLER, R. L.		
SULLIVAN, M.T.		
SWANSON, E.R.		
[illegible]MAN, K.G.		
[illegible]RINSON, R.B.		
WILSON, J.M.		
ZANE, J.O.		
Arndt M	X	X
Flory R	X	X
Hobbs E	X	X

CORRES CONTROL	x	x
TRAFFIC		

Reviewed for Addressee
Corres. Control REP
8-20-92

DATE BY

Ltr. #

RF-46522 (Rev. 6/92)

Department of Energy

00000 7204

ROCKY FLATS OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

AUG 18 1992 AUG 20 10 57 AM '92

92-DOE-9545

EG&G
ROCKY FLATS PLANT
CORRESPONDENCE CONTROL

Mr. Martin Hestmark
U.S. Environmental Protection Agency, Region VIII
ATTN: Rocky Flats Project Manager, 8HWM-RI
999 18th Street, Suite 500, 8WM-C
Denver, Colorado 80202-2405

Dear Mr. Hestmark:

In your July 13, 1992 letter regarding the OU 1 Wetlands Mitigation for the 881 Hillside French Drain Project at Rocky Flats, you requested additional information on tree planting that was described in the plan for reestablishing the wetland below Building 881 (92-DOE-7720). Enclosed, please find a copy of the OU 1 (881 Hillside French Drain Project) Wetlands Mitigation - Vegetation and Wildlife Habitat Enhancement Plan, which provides the information you requested.

Following is an update on the action items included in our agreement for the closure of the 881 Hillside French Drain Project (92-DOE-7720).

Wetland Restoration: The action agreed upon included excavation of the area between the current wetland and the surface water drainage route below the 881 building to provide for an enlarged wetland of approximately 2,000 sq. ft. in area. This action was accomplished on August 11, 1992, within the 45 day deadline.

The culvert installed for transporting water under the gravel road was cut off and rip rapped, as had been discussed.

Tree Planting: The existing small wetland is well stocked with cottonwood saplings approximately 4 to 8 feet high, so additional cottonwoods will not be planted. Instead of planting tree and shrub species on the hillside above the wetland next spring, they will be planted this fall in conjunction with the contractor seeding of the final ground cover over the French Drain project location.

We request EPA concurrence with the enclosed Wetlands Mitigation - Vegetation and Wildlife Habitat Enhancement Plan for the 881 Hillside Project. Approval should be given by signature on the concurrence lines presented at the bottom of this letter. Please return the copy with original signatures for our records.

A-OU01-000799

Any questions regarding this letter should be referred to my attention, or to Rich Schassburger at 966-4888.

Sincerely,

Frazer R. Lockhart
Director
Environmental Restoration Division

Enclosure

cc w/Enclosure:
G. Baughman, CDH
J. Wegrzyn, USFWS
M. Arndt, EG&G
R. Flory, EG&G
F. Hobbs, EG&G

OU 1 (881 Hillside French Drain Project)
Wetlands Mitigation - Vegetation and Wildlife Habitat Enhancement Plan

1.0 Introduction

The 881 Hillside French Drain Project (881HFDP) involves collection of contaminated groundwater from three sources within the 881 Hillside area, and pumping this water to a treatment facility where it is treated and discharged into the South Interceptor Ditch.

Approximately 1200 m^2 (12,917 ft^2) of tree and wetland habitat on the south-facing slope above Woman Creek drainage were removed during project construction. The Department of Energy (DOE) submitted a plan for reestablishing the wetland below Building 881 (92-DOE-7720) to EPA on July 8, 1992. On July 13, 1992, EPA submitted their signed concurrence with the wetland plan and asked for a brief, but detailed vegetation planting plan for replacing trees and wildlife habitat lost during construction of the 881 HFDP.

2.0 Purpose

This wildlife habitat enhancement plan provides additional information regarding trees and shrubs that will be planted on the hillside above the 881 HFDP, as requested by EPA.

The vegetation that is recommended to be established on the hillside above the area disturbed by the 881 HFDP will provide diversity in food and cover for deer, birds, small mammals, and other wildlife that are attracted to the wetland area. Species composition, planting patterns, and densities have been selected to maximize diversity and edge effect, and to effectively intersperse food and cover to benefit a variety of wildlife species.

Evergreen species will be used to help control erosion, and to provide windbreaks, cover and nesting habitat. Evergreens will also be used for snow management, to relocate snow drifts to provide increased moisture for the wetland area and for food-producing shrubs. Deciduous trees and larger deciduous shrubs will provide summertime shade, wintertime food, and nesting habitat. Shrubs that form dense thickets or that have thorns will provide escape cover and food for birds and small mammals.

3.0 Species Composition

Table 1 shows the species of evergreens, deciduous trees, and shrubs that will be used in the habitat planting effort. Probably not all of the species will be available from commercial sources when revegetation is effected, but as many species will be used

as is practical. Native drought-resistant species will be used as much as possible. Any non-native species included in the list were recommended by Soil Conservation Service, Colorado State Forest Service, or Colorado Division of Wildlife publications.

Table 2 shows the species that are specifically targeted to be used on the 881 HFDP if they are available. Other species from Table 1 will be substituted if any of the species listed in Table 2 are not available. Table 2 also shows the quantity and size of each species to be planted. Generally, containerized stock at least two feet high will be used. This size should allow the planted stock to compete effectively with the established grass ground cover. Larger stock are considerably more expensive to purchase, more costly and difficult to plant, and less likely to survive. However,larger stock will be utilized when the smaller stock is not available.

4.0 Planting Pattern

Figure 1 gives the general planting pattern to be used in the habitat development effort. Some adjustments to this plan will be necessary in the field to ensure that individual plants are placed in microhabitats that are favorable to their survival. Microhabitat variations are caused by differences in substrate, amounts of surface and subsurface moisture, incident solar radiation levels, etc. The general concept behind the planting pattern is to arrange trees and shrubs to provide shelter from winter winds, to maximize edge habitat, and to provide food near escape and nesting habitat.

5.0 Planting Schedule

Upon approval of this plan, planting will progress in conjunction with native grass seeding to produce groundcover on the disturbed 881 HFDP area. Planting of trees and shrubs to provide habitat on the hillside above the 881 HFDP is targeted for the fall of 1992.

Table 1. Species of trees, shrubs and evergreens to be used in habitat enhancement efforts.

EVERGREENS

Oneseed juniper	*Juniperus monosperma*
Rocky Mountain juniper	*Juniperus scopulorum*
Pinyon pine	*Pinus edulis*
Ponderosa pine	*Pinus ponderosa*

DECIDUOUS TREES

Hackberry	*Celtis occidentalis*
Cottonwood	*Populus sp.*
Bur oak	*Quercus macrocarpa*
Willow	*Salix sp.*

DECIDUOUS SHRUBS

Serviceberry	*Amelanchier alnifolia*
Cotoneaster	*Cotoneaster sp.*
Hawthorn	*Crataegus sp.*
Bearberry honeysuckle	*Lonicera involucrata*
American plum	*Prunus americana*
Common chokecherry	*Prunus virginiana*
Sumac	*Rhus sp.*
Golden currant	*Ribes aureum*
Elderberry	*Sambucus sp.*

Table 2. Quantity and sizes of species to be planted.

SPECIES	SYMBOL*	QUANTITY	SIZE
EVERGREENS			
Rocky Mountain juniper	R	12	2'-3'
Ponderosa pine	P	32	2'-3'
DECIDUOUS TREES			
Bur oak	B	10	2'-3'
Willow	W	5	2'-3'
DECIDUOUS SHRUBS			
Hawthorn	H	8	4'-5'
American plum	A	6	4'-5'
Common chokecherry	C	11	4'-5'
Sumac	S	14	4'-5'

* These letter symbols are used in Figure 1 to indicate where the species will be planted.

Figure 1. General Planting Pattern